



**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**49 CFR Parts 571 and 575**

**[Docket No. NHTSA-2020-0067]**

**RIN 2127-AL92**

**Standard Reference Test Tire**

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** This document proposes amendments to several Federal motor vehicle safety standards and consumer information regulations to update the standard reference test tire (SRTT) used therein. The SRTT is used in those standards and regulations as a baseline tire to rate tire treadwear, define snow tires based on traction performance, and evaluate pavement surface friction. This proposed rule is necessary because the only manufacturer of the currently referenced SRTT ceased production of the tire. Referencing a new SRTT ensures the availability of a test tire for testing purposes.

**DATES:** Submit comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may submit comments electronically to the docket identified in the heading of this document by visiting the following website:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

Alternatively, you can file comments using the following methods:

- Mail: Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue S.E., West Building Ground Floor, Room W12-140, Washington, D.C.

20590-0001

- Hand Delivery or Courier: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9826 before coming.
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Regardless of how you submit your comments, you should mention the docket number identified in the heading of this document.

*Instructions:* For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the Supplementary Information section of this document. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. Please see the Privacy Act heading below.

*Privacy Act:* In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, to [www.regulations.gov](http://www.regulations.gov), as described in the system of records notice, DOT/ALL-14 FDMS, accessible through [www.dot.gov/privacy](http://www.dot.gov/privacy). In order to facilitate comment tracking and response, we encourage commenters to provide their name, or the name of their organization; however, submission of names is completely optional. Whether or not commenters identify themselves, all timely comments will be fully considered. If you wish to provide comments containing proprietary or confidential information, please contact the agency for alternate submission instructions.

*Docket:* For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>. Follow the online instructions for accessing the dockets.

**FOR FURTHER INFORMATION CONTACT:** You may contact Hisham Mohamed, Office of Crash Avoidance Standards, by telephone at (202) 366-0307 or David Jasinski, Office of the Chief Counsel, by telephone at (202) 366-2992. The mailing address of both of these officials is:

National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590.

## **SUPPLEMENTARY INFORMATION:**

### **I. Background**

This rulemaking addresses the standard reference test tire (SRTT) manufactured according to specifications set forth in an ASTM International standard, E1136, “Standard Specification for P195/75R14 Radial Standard Reference Test Tire” (14-inch SRTT). The 14-inch SRTT is a size P195/75R14 all-season steel-belted radial tire. The dimensions, weight, materials, and other physical properties of the tire are specified in E1136. The tire is not intended for general use, but as the name indicates, is used for testing.

The 14-inch SRTT was first introduced in the 1980s. The 14-inch SRTT was manufactured by one company, Michelin North America, Inc (Michelin) and was sold under its Uniroyal brand. NHTSA uses the 14-inch SRTT to evaluate tire treadwear performance<sup>1</sup> by comparing a candidate tire’s performance to the performance of the SRTT in a particular performance test. NHTSA also uses the 14-inch SRTT to evaluate test surface friction<sup>2</sup> for safety standards relating to braking because the narrow specifications for the tire (size, component materials, etc.) ensure consistent, repeatable performance.

NHTSA first incorporated the 14-inch SRTT into the Federal Motor Vehicle Safety Standards (FMVSSs) in a 1995 rule adopting FMVSS No. 135, the light vehicle braking standard.<sup>3</sup> Previously, NHTSA had used skid number to define the road test surface in the light vehicle braking test. Testing a surface to determine skid number involved using a locked wheel. However, modern anti-lock brake systems (ABS) are designed to achieve maximum friction prior to a wheel becoming locked and the tire skidding. An anti-lock brake system prevents wheel lockup by modulating a vehicle’s brakes at a point just before the wheels would lock up.

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<sup>1</sup> 49 CFR 575.104.

<sup>2</sup> 49 CFR 571.105, 571.121, 571.122, 571.126, 571.135, 571.136, 571.139, 571.500.

<sup>3</sup> 60 FR 6411, 6415-17 (Feb. 2, 1995).

Consequently, in the 1995 final rule, NHTSA adopted ASTM method E1337, "Standard Test Method for Determining Longitudinal Peak Braking Coefficient (PBC) of Paved Surfaces Using Standard Reference Test Tire," as the means for evaluating test surfaces.<sup>4</sup> ASTM E1337 measures the peak braking force prior to wheel lockup, which corresponds to the behavior of an anti-lock brake system. ASTM E1337 specifies the use of the E1136 SRTT in order to ensure that variability in tire size, material, or construction does not affect the evaluation of test surfaces.

Over time, the evaluation of a test surface using the ASTM E1337 test method and the E1136 SRTT was incorporated into the heavy vehicle braking standards (FMVSS Nos. 105 and 121), the light and heavy vehicle electronic stability control standards (FMVSS Nos. 126 and 136), the motorcycle braking standard (FMVSS No. 122), and the low-speed vehicle standard (FMVSS No. 500).<sup>5</sup>

The use of the 14-inch SRTT is also incorporated into the definition of a "snow tire" in FMVSS No. 139. Specifically, a "snow tire" is defined as a tire that attains a traction index greater than or equal to 110 compared to the 14-inch SRTT when using the ASTM F1805 snow traction test. The ASTM F1805 snow traction test measures the driving traction of tires while traveling in a straight line on snow- and ice-covered surfaces. Tires that meet the definition of "snow tires" are subject to less stringent performance test requirements compared to other tires subject to FMVSS No. 139.<sup>6</sup>

The SRTT is also used as part of the Uniform Tire Quality Grading Standards (UTQGS), an information program to assist consumers in making informed decisions when purchasing tires.

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<sup>4</sup> Another reason for adopting the peak braking force related to the variability associated with determining skid number. That matter was discussed in more detail in NHTSA's earlier proposals to require heavy vehicles to be equipped with anti-lock brake systems. See 49 FR 20465 (May 14, 1984); 49 FR 28962 (July 17, 1984).

<sup>5</sup> ASTM E1337 is also incorporated by reference into 49 CFR 575.106, which are the provisions related to a new tire consumer information program. However, the test procedures in 49 CFR 575.106 are not currently used pending publication of a proposed and final rule establishing the remaining aspects of the consumer information program. See 75 FR 15893 (Mar. 30, 2010). Therefore, this proposal does not address 49 CFR 575.106. In a proposal implementing the remaining aspects of that tire consumer information program, NHTSA would address the issues discussed in this proposal.

<sup>6</sup> See 71 FR 877, 880 (Jan. 6, 2006).

The UTQGS apply to passenger car tires and require motor vehicle and tire manufacturers and tire brand name owners to provide consumers with information about their tires' relative performance regarding treadwear, traction, and temperature resistance.

The 14-inch SRTT is used as part of the determination of a tire's UTQG treadwear rating. As part of the UTQG test procedures, treadwear is measured by running the tires being tested (called candidate tires) in convoys over a 400-mile course of public roads near San Angelo, Texas. The performance of tires over this course can change daily due to variability in the road surface, temperature, humidity, and precipitation. To compensate for changes in condition of the test course, candidate tires are tested concurrently with course monitoring tires (CMTs).

NHTSA has used the 14-inch SRTT as the exclusive CMT since 1991. CMTs must be not more than one year old at the time of commencement of the test and must be used within two months from being removed from storage in order to prevent variability resulting from aging of the CMT. The performance of the CMT is used to determine the base course wear rate (BCWR) by running four-vehicle convoys equipped with 16 CMTs for 6,400 miles over the test course four times per year.<sup>7</sup> The wear rate of the CMT over the prior four quarterly CMT test runs are averaged to calculate the BCWR, which is published in Docket No. NHTSA-2001-9395. The BCWR is used to determine a course severity adjustment factor, which is applied to the comparison between the candidate tires and CMTs to determine a tire's rating.

## **II. Proposal to Replace 14-Inch SRTT with 16-Inch SRTT**

This proposal would amend NHTSA's safety standards and regulations to no longer reference the 14-inch SRTT. Because of technological advancements in the development of tires and the general trend of increasing rim diameter sizes since the 1980s, the size and materials of the 14-inch SRTT are no longer representative of modern tires sold in the U.S. Further, Michelin has ceased production of the 14-inch SRTT because it has become difficult for Michelin to

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<sup>7</sup> See 65 FR 33481 (May 24, 2000).

obtain the materials necessary to manufacture the SRTT.<sup>8</sup> Thus, NHTSA seeks to reference a different standard reference test tire in the agency's safety standards and regulations and to transition seamlessly to the new tire in the agency's compliance and consumer information test programs.

ASTM International has developed an updated specification for an SRTT designated F2493 (16-inch SRTT). The 16-inch SRTT is size P225/60R16. The 16-inch SRTT is considered to be more representative of current tires because of its larger size and new material and design features that lead to traction that is more typical of modern passenger car tires.<sup>9</sup> To the best of NHTSA's knowledge, the 16-inch SRTT is manufactured only by Michelin and sold under its Uniroyal brand.

To reference an SRTT that is more representative of tires on the road today, and in consideration of Michelin's decision to cease production of the 14-inch SRTT, NHTSA has determined that replacing the 14-inch SRTT in its regulations is warranted. The only suitable replacement for the 14-inch SRTT that has been suggested to NHTSA is the 16-inch SRTT. However, because the 16-inch SRTT is a larger size and uses more modern design and materials, it is likely that the 16-inch SRTT will not perform identically to the 14-inch SRTT. Therefore, NHTSA has been cooperating with Transport Canada, Natural Resources Canada, representatives of ASTM International committees F09 on tires and E17 on vehicle-pavement systems, the U.S. Tire Manufacturers Association (including Michelin, currently the sole manufacturer of SRTTs), and the Rubber Association of Canada to conduct testing to determine the consequences of replacing the 14-inch SRTT with the 16-inch SRTT. The results of the

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<sup>8</sup> See "Discontinued Tire Will Lead to ASTM Standard Changes" (July 30, 2015), *available at* <https://www.astm.org/cms/drupal-7.51/newsroom/discontinued-tire-will-lead-astm-standard-changes> (last accessed April 13, 2021).

<sup>9</sup> See "New ASTM Specification Presents Requirements for Standard Reference Test Tire" (April 1, 2007), *available at* <https://www.astm.org/cms/drupal-7.51/newsroom/new-astm-specification-presents-requirements-standard-reference-test-tire> (last accessed April 13, 2021).

testing by these entities, in addition to NHTSA's own testing, have substantially contributed to this proposal to replace the 14-inch SRTT with the 16-inch SRTT.<sup>10</sup>

## **A. Proposed FMVSS Amendments**

### **1. Surface Friction Measurement**

As discussed above, other than for defining a "snow tire," NHTSA uses the SRTT in the FMVSSs to define the surface coefficient of friction for the test surface for braking and electronic stability control (ESC) standards. The friction of the test surface is measured by the peak braking force prior to wheel lockup, which is referred to as a peak friction coefficient (PFC) or peak braking coefficient (PBC). For the purpose of this preamble, NHTSA uses the term peak friction coefficient or PFC, but the terms are used interchangeably in the FMVSS.

In the FMVSS, the peak friction coefficient of a surface is determined using the 1990 version of ASTM E1337 test method. The ASTM E1337 test method involves mounting the SRTT to a test trailer, bringing the trailer to a test speed of 40 mph (64 km/h), and applying the brake to produce the maximum braking force prior to wheel lockup.

When NHTSA was informed that production of the 14-inch SRTT was to be discontinued, NHTSA evaluated the 16-inch SRTT to determine whether it would be a suitable replacement. NHTSA carefully considered the effect of the 16-inch SRTT on the determination of PFC. NHTSA was concerned that the use of the 16-inch SRTT without further changes to the FMVSSs would increase the stringency of the braking and ESC FMVSSs. The reason for this was that the different materials used in the 16-inch SRTT and the increased size of the tire would result in the 16-inch SRTT having better traction performance than the 14-inch SRTT. If the 16-inch SRTT has improved traction performance relative to the 14-inch SRTT, then the same surface would have a higher PFC when tested with the 16-inch SRTT. Alternatively stated, obtaining an identical PFC value using the 16-inch SRTT would require a road surface with lower friction. Testing braking systems using stopping distance on road surfaces with lower

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<sup>10</sup> See Docket No. NHTSA-2020-0067.

friction would require improved braking performance to stop in the same distance, which is not an outcome intended by this rulemaking. Consequently, NHTSA sought a conversion factor to evaluate PFC of a test surface using the 16-inch SRTT without altering the severity of any braking or ESC FMVSSs.

Initial testing confirmed the assumption that using the 16-inch SRTT resulted in a test surface having a higher PFC than when evaluated using the 14-inch SRTT. Transportation Research Center, Inc. (TRC) conducted initial testing in support of the ASTM committee evaluating this issue (the E17.21 committee).<sup>11</sup> Testing was conducted on 15 different surfaces of varying friction. The evaluation of a dry test surface (e.g., 0.9 PFC using the 14-inch SRTT) using the 16-inch SRTT resulted in a PFC over 15 percent higher than the PFC derived using the 14-inch SRTT. However, testing on a low friction surface (0.5 PFC using the 14-inch SRTT) showed that the PFC derived using the 16-inch SRTT and the 14-inch SRTT was similar.

Because the difference in performance between the 16-inch SRTT and the 14-inch SRTT was not consistent for all levels of surface friction, something more than a simple multiplier is necessary to correlate performance between the two tires. ASTM International has developed such a formula. That formula is included in the 2019 update to ASTM E1337, which NHTSA is proposing to incorporate by reference into the FMVSSs, in place of the 1990 version of E1337 currently referenced. NHTSA has used the formula in the 2019 version of E1337 to derive PFC value for all of the FMVSSs. Those values are listed in the table below.

Each value derived using the formula was rounded to the hundredths position, rounding up if necessary. This ensures that the updated FMVSS test surface PFC specification will be no more stringent as a result of this proposed amendment than it is now, consistent with NHTSA's intent in this rulemaking.

FMVSS Section	PFC value using 14-inch SRTT	PFC value using 16-inch SRTT
FMVSS No. 105 S6.9.2(a) (high friction testing)	0.9	1.02
FMVSS No. 105 S6.9.2(b) (low friction testing)	0.5	0.55

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<sup>11</sup> See docket No. NHTSA-2020-0067.



FMVSS No. 121 S5.3.1.1, S5.7.1, S6.1.7 (high friction testing) <sup>12</sup>	0.9	1.02
FMVSS No. 121 S5.3.6.1, S6.1.7 (low friction testing)	0.5	0.55
FMVSS No. 122 S6.1.1.1 (high friction testing)	0.9	1.02
FMVSS No. 122 S6.1.1.2 (low friction testing)	$\leq 0.45$	$\leq 0.50$
FMVSS No. 122 S6.9.7.1	$\geq 0.8$	$\geq 0.90$
FMVSS No. 126 S6.2.2	0.9	1.02
FMVSS No. 135 S6.2.1, S7.4.3, S7.5.2, S7.6.2, S7.7.3, S7.8.2, S7.9.2, S7.10.3, S7.11.3	0.9	1.02
FMVSS No. 136	0.9	1.02
FMVSS No. 500 <sup>13</sup>	0.9	1.02

NHTSA commissioned confirmatory testing using the 16-inch SRTT to verify that the PFC values discussed above are equivalent to the PFC values in the FMVSSs derived using the 14-inch SRTT. NHTSA has contracted with TRC to conduct this testing on five different test surfaces (wet ceramic, wet jennite, wet asphalt, dry asphalt, and dry broomed concrete). These test surfaces range from high to low PFC values. For each test surface, 10 of each of the 14-inch SRTT and the 16-inch SRTT were each tested 3 times with 10 stops per test, for a total of 300 tests for each size SRTT on each test surface. A final report summarizing the results has been placed in the docket identified at the beginning of this NPRM.

## 2. Snow Tire Definition

Presently, for a manufacturer to designate a tire as a "snow tire," the tire must attain a traction index equal to or greater than 110 compared to the 14-inch SRTT when tested using the snow traction test in the 2000 version of ASTM F1805. The ASTM F09 committee on tires commissioned a study to determine the feasibility of replacing the 14-inch SRTT with the 16-inch SRTT in the determination of whether a tire meets the definition of "snow tire." This study was funded by the United States Tire Manufacturers Association (USTMA).

<sup>12</sup> NHTSA is also proposing to revise Tables I, II, and IIA in FMVSS No. 121 to eliminate the redundant references to PFC values in those tables. In place of PFC values, NHTSA is proposing to include in Table I (Stopping Sequence) references to the sections in which the various procedures are set forth, which is a more helpful reference.

<sup>13</sup> Although FMVSS No. 500 specifies a PFC value for the test surface, the test surface is only used to verify the vehicle's maximum speed.

The study consisted of testing of traction during the winter test seasons of 2016, 2017, and 2018 to develop a method to correlate results of tests conducted using the 16-inch SRTT with those conducted using the 14-inch SRTT. ASTM International has published a technical report documenting this work.<sup>14</sup> ASTM International determined that a correlation factor of 0.9876 was appropriate, meaning that a tire that attained a rating of 110 when tested using the 14-inch SRTT correlated to a rating of 111.4 or 111.5 when tested using the 16-inch SRTT, depending on the number of significant digits considered. Recent guidance issued by the USTMA, a trade association consisting of companies that manufacture tires in the United States, recommends a minimum traction index of 112 using the 16-inch SRTT.<sup>15</sup> Accordingly, NHTSA is proposing to amend the definition of "snow tire" in FMVSS No. 139 to specify that a snow tire is a tire that attains a traction index of 112 when tested using the updated F1895 test method using the 16-inch SRTT. This proposal is consistent with the guidance issued by USTMA, which NHTSA believes reflects a consensus within the tire industry on the appropriate traction index for use in determining what qualifies as a "snow tire." NHTSA seeks comment on this proposal.

Furthermore, after reviewing this information from the USTMA, NHTSA determined that additional clarification was necessary to the definition of a "snow tire" in FMVSS No. 139. The latest (2020) version of ASTM F1805 defines the standard test procedure for measuring traction on "snow" and "ice" surfaces. However, there are multiple surface types in both the "snow" and "ice" categories. They include soft pack (new) snow, medium pack snow, medium hard pack snow, hard pack snow, ice – wet, and ice – dry.<sup>16</sup> The definition of "snow tire" in FMVSS No. 139 does not specify the surface type specified within ASTM F1805 for testing.

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<sup>14</sup> Available at [https://www.astm.org/COMMIT/2019\\_04\\_10\\_E1136%20to%20F2493%20transition%20for%20ASTMF1805.pdf](https://www.astm.org/COMMIT/2019_04_10_E1136%20to%20F2493%20transition%20for%20ASTMF1805.pdf) (last accessed April 13, 2021).

<sup>15</sup> See [https://www.ustires.org/sites/default/files/USTMA\\_TISB\\_37\\_0.pdf](https://www.ustires.org/sites/default/files/USTMA_TISB_37_0.pdf) (last accessed April 13, 2021).

<sup>16</sup> The surface types are defined in the text of ASTM F1805.

NHTSA interprets that the "medium pack snow" condition was intended for use by manufacturers for marketing tires as "snow tires." NHTSA seeks comment on whether this assumption is correct. It is the surface type specified for severe snow tires in UNECE Regulation No. 117 for determining when use of the Alpine or Three-Peak Mountain Snowflake marking that indicates that a tire meets the requirements for use in severe snow conditions. Based upon the research on the SRTT, the 2020 revision of ASTM F1805 contains a revised tractive coefficient range for "medium pack snow" using the 14-inch SRTT from 0.25-0.41 to 0.25-0.38 and adds a tractive coefficient range for "medium pack snow" using the 16-inch SRTT of 0.23-0.38.

Based on the research by ASTM International and USTMA's recent guidance, NHTSA is proposing to update the definition of a "snow tire": (1) To replace the reference to the 14-inch SRTT with the 16-inch SRTT and to change the minimum traction index in order to meet the definition of a "snow tire" from 110 to 112 using this tire; (2) to specify that this traction index is obtained when tested on the "medium pack snow" surface, and (3) to update the incorporation by reference of ASTM F1805 from the 2000 version to the 2020 version, which is the latest version. ASTM F1805-20 incorporates the research discussed above. NHTSA is not aware of other research on equivalent performance of the 14-inch SRTT and 16-inch SRTT on snow-covered surfaces other than the testing by ASTM International.

#### B. Proposed UTQGS Amendments

In anticipation of Michelin's decision to cease production of the 14-inch SRTT, NHTSA began including testing of the 16-inch SRTT as part of its BCWR determination. Since the second quarter of 2016, NHTSA has been duplicating BCWR testing using both the 14-inch SRTT and the 16-inch SRTT. NHTSA has shared some data from this testing with its testing partners (named at the end of Section I of this preamble) in order to develop options that could be implemented once production of the 14-inch SRTT has ended. Four options have been considered:

1. Use the research data to develop a correlation formula between the 14-inch SRTT and the 16-inch SRTT. While this would allow future testing and rating to be based on either SRTT, it was likely to be the most resource-intensive to develop and validate a formula.
2. Establish an effective date for the 16-inch SRTT and begin publishing the quarterly BCWR after that date using four quarters of data using that tire. After two quarters of testing it was apparent that this was likely to result in a shift in the BCWR. However, large shifts in BCWR have occurred in the past, such as when repaving was done on portions of the route.
3. Allow a transition period in which NHTSA would publish BCWR rates for both SRTTs, allowing manufacturers to choose when to shift within that period.
4. Establish an effective date to begin quarterly testing with the 16-inch SRTT, but continue to calculate the BCWR rate using the prior quarterly testing results used to calculate prior BCWR rates. The first quarter with official testing using the 16-inch SRTT CMT would result in a BCWR rate calculated from the average of those results and the results of the previous three quarters testing using the 14-inch SRTT CMT, the second quarter would average two quarters with the 16-inch SRTT CMT and 2 quarters with the 14-inch SRTT CMT, and so on.

In 2017, Michelin informed NHTSA that the test results from the first two quarters of testing were within the normal variability seen for BCWR.<sup>17</sup> Michelin believed that NHTSA could develop an entirely new formula for determining BCWR, but believed that such a formula may not be able to be developed prior to the end of production of 14-inch SRTT. Instead, Michelin recommended adding a new conversion factor to the existing formula derived from the ratio of the BCWR from the 14-inch SRTT CMT to the BCWR of the 16-inch SRTT CMT measured over a specific number of quarters of testing. Michelin recommended that this factor

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<sup>17</sup> Michelin presentation; UTQG Wear Change from 14" TO 16" SRTT First Two Test Quarters. See docket No. NHTSA-2020-0067.

be based on at least six quarters of testing, which was all the testing that was available at the time of Michelin's recommendation.

NHTSA now has 14 consecutive quarters of testing data. Table 1 summarizes the quarterly BCWR values determined by NHTSA since the first quarter of 2017. As shown in Table 1, NHTSA has determined BCWR reference values for the 16-inch SRTT. Table 1 also shows BCWR rates for the 16-inch SRTT beginning in Q2 2017 after four quarters of BCWR values were obtained. Table 1 also shows a conversion factor based on the ratio of the BCWR using the 14-inch SRTT to the BCWR using the 16-inch SRTT measured over all available quarters of testing.

Table 1  
Quarterly BCWR Data Since April 2016

	14-inch SRTT BCWR data	16-inch SRTT BCWR data	Quarterly Published BCWR Rate	Theoretical 16-inch SRTT BCWR Rate	Derived Conversion Factor Based on Prior Six Quarters
January – March 2017	8.090	5.349	9.059		
April - June 2017	7.556	5.952	8.573		
July – September 2017	9.640	6.189	8.692		
October – December 2017	8.932	6.578	8.555	6.017	
January – March 2018	7.481	5.731	8.402	6.113	
April - June 2018	8.253	6.074	8.577	6.143	1.392
July – September 2018	9.648	6.467	8.579	6.213	1.393
October – December 2018	8.867	6.602	8.562	6.219	1.403
January – March 2019	6.555	5.999	8.331	6.286	1.328
April - June 2019	8.242	5.506	8.328	6.144	1.348
July – September 2019	7.243	5.656	7.727	5.941	1.344
October – December 2019	7.237	6.206	7.319	5.842	1.312
January – March 2020	7.695	5.259	7.604	5.657	1.301
April - June 2020	6.719	5.616	7.224	5.684	1.276
July - September 2020	6.983	6.856	7.159	5.984	1.257
October - December 2020	8.122	6.886	7.380	6.154	1.206
January – March 2021	7.228	4.687	7.263	6.011	1.239

The conversion factor listed in the last column of Table 1 is determined by dividing the average of six quarters of BCWR testing with the 14-inch SRTT by the average of the same six quarters of BCWR with the 16-inch SRTT. The conversion factor is similar for all quarters currently available. NHTSA requests comments on how the new conversion factor should be

selected from among the available quarters of data. For example, NHTSA could use the last six (or some other number) of quarters of data, or all data available to determine the conversion factor. NHTSA requests comments on which of these possible conversion factors NHTSA could use and why.

For this NPRM, NHTSA is basing the adjustment on the average of all 17 consecutive quarters of available data. The average BCWR wear rate using the 14-inch SRTT is 7.911. The average BCWR wear rate using the 16-inch SRTT is 5.942. Dividing 7.911 by 5.977 results in a conversion factor of 1.324. Based upon this new conversion factor, the new formula for the treadwear grade, assuming the decision was to use the most recent quarter's conversion factor, would be:<sup>18</sup>

$$P = \frac{\text{Projected mileage} \times \text{base course wear rate}_{14}}{402}$$

$$P = \frac{\text{Projected mileage} \times \text{base course wear rate}_{16}}{402} \times \left( \frac{\text{base course wear rate}_{14}}{\text{base course wear rate}_{16}} \right)$$

$$\text{Conversion Factor} = \frac{\text{base course wear rate}_{14}}{\text{base course wear rate}_{16}} = 1.324$$

$$P = \frac{\text{Projected mileage} \times \text{base course wear rate}}{402} \times 1.324$$

$$P = \frac{\text{Projected mileage} \times \text{base course wear rate}}{304}$$

NHTSA does not believe the calculation of projected mileage as used in this formula also requires adjustment, as the calculation takes into consideration the actual measurement of the CMT used during the test of the candidate tire being evaluated.

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<sup>18</sup> The first equation definition P is set forth in 49 CFR 57.104(e)(2)(ix)(F).

NHTSA is also proposing to modify language in the treadwear test procedure in §575.104 to reference the total distance and schedule of events in terms of circuits completed rather than mileage. This proposed change is intended to allow testing to be more flexible in the vent of route changes or other unforeseen circumstances. With the added flexibility of these changes, NHTSA believes that it is preferable to use the actual mileage of the completed circuit in the calculation of the wear rate rather than the estimated 400 miles per circuit. NHTSA believes that this would ensure that the wear rate reflects the actual mileage covered if the completed 16 circuits is not exactly 6,400 miles. NHTSA seeks comment on these proposed changes and any potential effects they may have on the testing process or data integrity.

NHTSA also seeks comment on the specification in the note to §575.104(e)(2)(ix)(C) that the CMT must be no more than one year old at the commencement of testing and that it must be used within two months after removal from storage. NHTSA lacks facilities to store tires in a climate-controlled environment at its testing facility in San Angelo, Texas. Therefore, because of the time limitations on the use of the CMT in the BCWR testing, NHTSA only purchases CMTs on a quarterly basis depending on funding availability and conducts BCWR testing as soon as feasible after receiving a shipment of CMTs. Lack of funding sometimes requires NHTSA to delay CMT purchases, and sometimes when NHTSA purchases CMTs, supplies may be limited, meaning that NHTSA is required to wait weeks or months before receiving CMTs for testing. To increase NHTSA's flexibility in purchasing and testing CMTs, NHTSA is considering lengthening the amount of time tires may be removed from storage to four months, so that NHTSA can purchase CMTs in advance and store them in its San Angelo facility. NHTSA also requests comment on whether the word "storage" is sufficiently well defined and, if not, how NHTSA could define "storage" more clearly to ensure tires are stored in such a way that would minimize testing variability without providing inflexible limitations on NHTSA's use of the SRTT. NHTSA requests comment on this proposed change.

#### C. Summary

Based on the foregoing, NHTSA has tentatively concluded that the best course of action in response to Michelin's determination to cease production of the 14-inch SRTT is to replace the 14-inch SRTT with the 16-inch SRTT for all uses in NHTSA's standards and regulations. Because the 16-inch SRTT is a different size and made of different materials, changes are necessary to the FMVSS and tire regulations to ensure that the use of the 16-inch SRTT to evaluate test surface friction does not alter the stringency of the standards or the treadwear ratings of tires in the UTQGS treadwear testing program. NHTSA tentatively believes that this proposal accomplishes those goals. NHTSA requests comment on that determination, the merits of these goals, and whether the proposed amendments would accomplish those goals. NHTSA also seeks comment on the use and storage requirements for the CMT tires used in the BCWR calculation.

### **III. Effective Date**

For the changes to the UTQGS, NHTSA expects to make these changes effective at the next BCWR determination at least 30 days after the date of publication of a final rule. NHTSA does not believe any further lead time is necessary for the following reasons. First, because NHTSA is using a conversion factor to keep the rating scale used with the 14-inch SRTT and 16-inch SRTT identical, ratings of a particular line of tires should not be affected by this proposed rule. Second, tire lines rated prior to the effective date of the changes proposed in this rule would not be required to be rerated. Third, limited availability of the 14-inch SRTT could make it difficult for NHTSA to continue to obtain 14-inch SRTTs in its BCWR determinations. NHTSA is currently restricted by its regulations to using SRTTs that were manufactured within one year prior to the commencement of testing and two months after removal from storage in order to prevent variability in results due to tire aging. This provision prevents NHTSA from stockpiling 14-inch SRTTs.

For FMVSS changes, NHTSA is proposing a lead time of six months. This will give NHTSA's compliance test facilities sufficient time to obtain and validate test surfaces using the



16-inch SRTT. Although NHTSA has determined an equivalent level of surface friction when evaluating PBC with the 16-inch SRTT in place of the 14-inch SRTT, NHTSA anticipates requiring test facilities conducting NHTSA's compliance tests to revalidate test surfaces using the 16-inch SRTT, to ensure that testing is being done in accordance with the procedures in the FMVSS. A six-month lead time is consistent with the requirements of 49 U.S.C. 30111(d) that standards be effective between 180 days and 1 year after they are prescribed. However, potential unavailability of the 14-inch SRTT may constitute good cause for NHTSA to impose a shorter lead time in a final rule resulting from this proposal.

NHTSA does not believe that manufacturers require more than six months of lead time. Because NHTSA intends the proposed peak braking coefficient specifications in the FMVSS using the 16-inch SRTT to be an equivalent level of friction to existing peak braking coefficients using the 14-inch SRTT, NHTSA does not intend to affect the FMVSS compliance of any vehicle and does not believe this proposal would do so.

NHTSA requests comments on the proposed lead time for changes to the UTQGS and FMVSSs.

#### **IV. Public Participation**

##### How Do I Prepare and Submit Comments?

To ensure that your comments are correctly filed in the Docket, please include the docket number of this document in your comments.

Your comments must not be more than 15 pages long (49 CFR 553.21). NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit your comments electronically to the docket following the steps outlined under ADDRESSES. You may also submit two copies of your comments, including the attachments, by mail to Docket Management at the beginning of this document, under

## ADDRESSES.

### How Can I Be Sure That My Comments Were Received?

If you wish to be notified upon receipt of your mailed comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

### How Do I Submit Confidential Business Information?

If you wish to submit any information under a claim of confidentiality, you should submit the following to the NHTSA Office of Chief Counsel, 1200 New Jersey Avenue S.E., Washington, D.C. 20590: (1) a complete copy of the submission; (2) a redacted copy of the submission with the confidential information removed; and (3) either a second complete copy or those portions of the submission containing the material for which confidential treatment is claimed and any additional information that you deem important to the Chief Counsel's consideration of your confidentiality claim. A request for confidential treatment that complies with 49 CFR part 512 must accompany the complete submission provided to the Chief Counsel. For further information, submitters who plan to request confidential treatment for any portion of their submissions are advised to review 49 CFR part 512, particularly those sections relating to document submission requirements. Failure to adhere to the requirements of part 512 may result in the release of confidential information to the public docket. In addition, you should submit two copies from which you have deleted the claimed confidential business information, to Docket Management at the address given at the beginning of this document under ADDRESSES. To facilitate social distancing during COVID-19, NHTSA is temporarily accepting confidential business information electronically. Please see <https://www.nhtsa.gov/coronavirus/submission-confidential-business-information> for details.

### Will the Agency Consider Late Comments?

NHTSA will consider all comments received before the close of business on the comment closing date indicated at the beginning of this document under DATES. In accordance

with DOT policies, to the extent possible, NHTSA will also consider comments received after the specified comment closing date. If NHTSA receives a comment too late to consider in developing the proposed rule, NHTSA will consider that comment as an informal suggestion for future rulemaking action.

#### How Can I Read the Comments Submitted by Other People?

You may read the comments received on the Internet. To read the comments on the Internet, go to <http://www.regulations.gov> and follow the on-line instructions provided.

You may download the comments. The comments are imaged documents, in either TIFF or PDF format. Please note that even after the comment closing date, NHTSA will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, NHTSA recommends that you periodically search the Docket for new material.

You may also see the comments at the address and times given near the beginning of this document under ADDRESSES.

### **V. Regulatory Analyses**

#### *A. Executive Order 12866, Executive Order 13563, and DOT Rulemaking Procedures*

NHTSA has considered the impact of this rulemaking action under Executive Order 12866, Executive Order 13563, and the Department of Transportation's administrative rulemaking procedures. This rulemaking is not considered significant and was not reviewed by the Office of Management and Budget under E.O. 12866, "Regulatory Planning and Review."

This proposal updates the standard reference test tire used as a baseline tire for consumer information testing, in the determination of what is a snow tire, and to evaluate testing surface friction for evaluating braking and electronic stability control performance. This proposal will not have a direct effect on safety because the changes proposed in this rule are designed to maintain the present level of stringency of NHTSA's braking and electronic stability control FMVSSs. However, if the 14-inch SRTT is discontinued without a replacement, NHTSA would

be unable to verify test surface friction coefficient prior to compliance testing for braking and electronic stability control system FMVSSs. Thus, this rulemaking indirectly affects safety by ensuring that NHTSA would be able to perform compliance tests of those FMVSSs. Also, if this proposal were not adopted, it is expected that the 14-inch SRTT would soon no longer be available for purchase, rendering it impossible for NHTSA to continue maintaining the BCWR for treadwear testing. This unavailability of an SRTT would lead to tire manufacturers being unable to rate their tires for treadwear under the UTQGS and mold those ratings onto the side of the tire as required by 49 CFR part 575.

This proposed rule is expected to result in additional costs to NHTSA because the 16-inch SRTT has a retail price that is \$35 per tire more than the 14-inch SRTT (\$335 vs. \$300).<sup>19</sup> NHTSA purchases 64 SRTTs for its own use annually in determining BCWR. Therefore, based on the cost difference of \$35 per tire, NHTSA expects that, if adopted, this proposal would result in \$2,240 additional annual costs to the government. However, NHTSA has been using the 14-inch SRTT and 16-inch SRTT side-by-side since 2016 for its quarterly BCWR determination in anticipation of this rulemaking and NHTSA plans to continue to do so until this proposal is finalized. After this proposal is finalized, NHTSA does not expect to continue purchasing 14-inch SRTTs. Therefore, when compared to years since 2016, NHTSA would likely purchase fewer SRTTs in subsequent years after this proposal is finalized.

As to potential costs to the public, based upon information provided to NHTSA by Michelin from 2017 and 2018, annual U.S. sales of 14-inch SRTTs is fewer than 2,000 units. Assuming that U.S. sales of 16-inch SRTTs is comparable to sales of 14-inch SRTTs, the annual cost of this proposal would be less than \$70,000. However, NHTSA does not know how many sales are a consequence of the SRTT being used as part of NHTSA's compliance test procedures, versus those sold for other purposes (e.g., SRTTs sold to assess the performance of tires to some

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<sup>19</sup> Data on the price of the SRTT was obtained from instructions on how to purchase SRTTs from Michelin. See <https://www.astm.org/COMMIT/2011%2011%2008%20E1136%20F2493%20SRTT%20Purchase%20Procedure.pdf> (last accessed April 13, 2021).

other country's regulations or to voluntary industry standards). Any SRTT sales that are not related to compliance with NHTSA's regulations would not be affected by this proposal and the existence of such sales would mean this rule would be less costly than the maximum estimate of \$70,000 per year. Moreover, NHTSA does not have any direct knowledge of whether regulated entities have been conducting side-by-side testing using both the 14-inch SRTT and 16-inch SRTTs like NHTSA has and whether side-by-side testing has artificially increased sales in 2017 and 2018.

NHTSA requests comments on the benefits and costs of this NPRM.

#### *B. Regulatory Flexibility Act*

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). The Small Business Administration's regulations at 13 CFR part 121 define a small business, in part, as a business entity "which operates primarily within the United States." (13 CFR 121.105(a)). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule would not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule would not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the effects of this proposal under the Regulatory Flexibility Act. I certify that this proposal will not have a significant economic impact on a substantial number of small entities. This proposal would directly impact the government, as it affects only the test procedures NHTSA uses in its FMVSSs and regulations that reference tire performance. It affects manufacturers of tires and of motor vehicles only to the extent those manufacturers

choose to test their products in the manner NHTSA would test them. They are not required to use the test procedures NHTSA uses.

Although we believe some entities producing tires or vehicles that would be tested by NHTSA using procedures that use the 16-inch SRTT are considered small businesses, we do not believe this proposal will have a significant economic impact on those manufacturers. First, the small manufacturers are not required to use the SRTT in certifying their products. Second, for manufacturers choosing to use the 16-inch SRTT to test their products, this proposal would result in a cost increase of only \$35 per tire to entities currently purchasing the 14-inch SRTT to assess their products. We do not believe this cost increase is significant. Finally, for the changes to the UTQGS, because NHTSA is using a conversion factor to keep the rating scale used with the 14-inch SRTT and 16-inch SRTT identical, ratings of a particular line of tires should not be affected by this proposed rule. For FMVSS changes, NHTSA has determined an equivalent level of surface friction when evaluating PBC with the 16-inch SRTT in place of the 14-inch SRTT, so the change to the standard reference test tire should not change the performance of current tires or vehicles.

### *C. Executive Order 13132 (Federalism)*

NHTSA has examined this proposal pursuant to Executive Order 13132 (64 FR 43255, August 10, 1999) and concluded that no additional consultation with States, local governments or their representatives is mandated beyond the rulemaking process. The agency has concluded that the rulemaking would not have sufficient federalism implications to warrant consultation with State and local officials or the preparation of a federalism summary impact statement. The proposal would not have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

NHTSA rules can preempt in two ways. First, the National Traffic and Motor Vehicle Safety Act contains an express preemption provision: When a motor vehicle safety standard is in

effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment only if the standard is identical to the standard prescribed under this chapter. 49 U.S.C. 30103(b)(1). It is this statutory command by Congress that preempts any non-identical State legislative and administrative law addressing the same aspect of performance.

The express preemption provision described above is subject to a savings clause under which "[c]ompliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law." 49 U.S.C. 30103(e). Pursuant to this provision, State common law tort causes of action against motor vehicle manufacturers that might otherwise be preempted by the express preemption provision are generally preserved. However, the Supreme Court has recognized the possibility, in some instances, of implied preemption of such State common law tort causes of action by virtue of NHTSA's rules, even if not expressly preempted. This second way that NHTSA rules can preempt is dependent upon there being an actual conflict between an FMVSS and the higher standard that would effectively be imposed on motor vehicle manufacturers if someone obtained a State common law tort judgment against the manufacturer, notwithstanding the manufacturer's compliance with the NHTSA standard. Because most NHTSA standards established by an FMVSS are minimum standards, a State common law tort cause of action that seeks to impose a higher standard on motor vehicle manufacturers will generally not be preempted. However, if and when such a conflict does exist - for example, when the standard at issue is both a minimum and a maximum standard - the State common law tort cause of action is impliedly preempted. See Geier v. American Honda Motor Co., 529 U.S. 861 (2000).

Pursuant to Executive Orders 13132 and 12988, NHTSA has considered whether this proposed rule could or should preempt State common law causes of action. The agency's ability to announce its conclusion regarding the preemptive effect of one of its rules reduces the likelihood that preemption will be an issue in any subsequent tort litigation.

To this end, the agency has examined the nature (e.g., the language and structure of the regulatory text) and objectives of this proposed rule and finds that this proposal would affect only minimum safety standards (and only insofar as how NHTSA would conduct compliance testing under those standards). As such, NHTSA does not intend that this proposed rule preempt State tort law that would effectively impose a higher standard on motor vehicle manufacturers than that established by the affected FMVSSs. Establishment of a higher standard by means of State tort law would not conflict with the minimum standards affected by this proposal. Without any conflict, there could not be any implied preemption of a State common law tort cause of action. Aspects of this proposed rule would amend 49 CFR part 575, which is not a safety standard but an information program to assist consumers in making informed decisions when purchasing tires. The 14-inch SRTT is used as part of the determination of a tire's treadwear rating. This proposed change would not impose any requirements on anyone.

*D. Executive Order 12988 (Civil Justice Reform)*

With respect to the review of the promulgation of a new regulation, section 3(b) of Executive Order 12988, "Civil Justice Reform" (61 FR 4729; Feb. 7, 1996), requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) specifies whether administrative proceedings are to be required before parties file suit in court; (6) adequately defines key terms; and (7) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with that requirement.

Pursuant to this order, NHTSA notes as follows. The issue of preemption is discussed above. NHTSA notes further that there is no requirement that individuals submit a petition for reconsideration or pursue other administrative proceedings before they may file suit in court.



#### *E. Protection of Children from Environmental Health and Safety Risks*

Executive Order 13045, "Protection of Children from Environmental Health and Safety Risks" (62 FR 19855, April 23, 1997), applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental, health, or safety risk that the agency has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency.

This proposal is not economically significant under E.O. 12866. Further, it is part of a rulemaking that is not expected to have a disproportionate health or safety impact on children. Consequently, no further analysis is required under Executive Order 13045.

#### *F. Paperwork Reduction Act*

Under the Paperwork Reduction Act of 1995 (PRA), a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid Office of Management and Budget (OMB) control number. There is not any information collection requirement associated with this proposal.

#### *G. Incorporation by Reference*

Under regulations issued by the Office of the Federal Register (1 CFR 51.5(a)), an agency, as part of a proposed rule that includes material incorporated by reference, must summarize material that is proposed to be incorporated by reference and must discuss the ways the material proposed to be incorporated by reference is reasonably available to interested parties or how the agency worked to make materials available to interested parties.

This proposed rule would incorporate by reference ASTM F2493, "Standard Specification for P225/60R16 97S Radial Standard Reference Test Tire," to replace the existing incorporation by reference of ASTM E1136, which is a 14-inch standard reference test tire. As

discussed earlier in this document, the ASTM F2493 is a standard reference test tire that is not used for general use, but, as its name suggests, is used for testing. The ASTM F2493 standard reference test tire is primarily used for evaluating surface friction (traction). The standard reference test tire specifications include, among other things, size, design, construction, and materials requirements.

This proposed rule would also update an existing incorporation by reference of ASTM E1337, "Standard Test Method for Determining Longitudinal Peak Braking Coefficient (PBC) of Paved Surfaces Using Standard Reference Test Tire." ASTM E1337 is a standard test method for evaluating peak braking coefficient of a test surface using a standard reference test tire using a trailer towed by a vehicle. NHTSA uses this method to evaluate test surfaces for conducting compliance test procedures for its braking and electronic stability control standards. The 2019 version of ASTM E1337 specifies that the test may be conducted using the 16-inch SRTT and includes correlation data for converting testing using the 14-inch SRTT to the 16-inch SRTT and vice versa.

Finally, this proposed rule would update an existing incorporation by reference of ASTM F1805, "Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces." ASTM F1805 is a test method for measuring the traction of tires on snow- or ice-covered surfaces using an instrumented four-wheel drive vehicle with a single test wheel capable of measure tire performance. NHTSA uses ASTM F1805 as part of its criteria for determining whether a tire may be considered a "snow tire" under its light vehicle tire standards. The 2020 version of F1805 specifies that the test may be conducted using the 16-inch SRTT and includes correlation data for converting testing using the 14-inch SRTT to the 16-inch SRTT and vice versa.

The ASTM standards proposed for incorporation by reference in this NPRM are available for review at NHTSA's headquarters in Washington, DC, and for purchase from ASTM International. The ASTM standards that are currently incorporated by reference (and which

would be replaced under this proposal) are available for review at NHTSA or at ASTM International's online reading room.<sup>20</sup> If this proposal is adopted as a final rule, NHTSA anticipates that ASTM International would update its reading room to include these standards.

#### *H. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (e.g., the statutory provisions regarding NHTSA's vehicle safety authority) or otherwise impractical. Voluntary consensus standards are technical standards developed or adopted by voluntary consensus standards bodies. Technical standards are defined by the NTTAA as "performance-based or design-specific technical specification and related management systems practices." They pertain to "products and processes, such as size, strength, or technical performance of a product, process or material."

Examples of organizations generally regarded as voluntary consensus standards bodies include ASTM International, the Society of Automotive Engineers (SAE), and the American National Standards Institute (ANSI). If NHTSA does not use available and potentially applicable voluntary consensus standards, we are required by the Act to provide Congress, through OMB, an explanation of the reasons for not using such standards.

As discussed above, both standard reference test tires are based on specifications published by ASTM International. Thus, this rulemaking accords with the requirements of the NTTAA.

#### *I. Unfunded Mandates Reform Act*

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of more than \$100 million annually

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<sup>20</sup> <https://www.astm.org/READINGLIBRARY/>.

(adjusted for inflation with base year of 1995). Before promulgating a NHTSA rule for which a written statement is needed, section 205 of the UMRA generally requires the agency to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the agency to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the agency publishes with the final rule an explanation of why that alternative was not adopted.

This proposal would not result in any expenditure by State, local, or tribal governments or the private sector of more than \$100 million, adjusted for inflation.

*J. National Environmental Policy Act*

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action would not have any significant impact on the quality of the human environment.

*K. Regulation Identifier Number (RIN)*

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

**List of Subjects**

**49 CFR Part 571**

Imports, Incorporation by reference, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

**49 CFR Part 575**

Consumer protection, Incorporation by reference, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

In consideration of the foregoing, NHTSA proposes to amend 49 CFR parts 571 and 575 as follows:

**PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS**

1. The authority citation for part 571 of title 49 continues to read as follows:

**Authority:** 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.95.

2. Amend § 571.5 by revising paragraphs (d)(33) through (35) to read as follows:

**§ 571.5 Matter incorporated by reference.**

\* \* \* \* \*

(d) \* \* \*

(33) ASTM E1337-19, "Standard Test Method for Determining Longitudinal Peak Braking Coefficient (PBC) of Paved Surfaces Using Standard Reference Test Tire," approved December 1, 2019, into §§571.105; 571.121; 571.122; 571.126; 571.135; 571.136; 571.500.

(34) ASTM F1805-20, "Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces," approved May 1, 2020, into § 571.139.

(35) ASTM F2493-19, "Standard Specification for P225/60R16 97S Radial Standard Reference Test Tire," approved Oct. 1, 2019, into §§ 571.105; 571.121; 571.122; 571.126; 571.135; 571.136; 571.139; 571.500.

\* \* \* \* \*

3. Amend § 571.105 by removing paragraphs S6.9.2(a) and S6.9.2(b) and adding paragraph S6.9.2 to read as follows:

**§ 571.105 Standard No. 105; Hydraulic and electric brake systems.**

\* \* \* \* \*

S6.9.2 (a) For vehicles with a GVWR greater than 10,000 pounds, road tests (excluding stability and control during braking tests) are conducted on a 12-foot-wide, level roadway, having a peak friction coefficient of 1.02 when measured using an ASTM F2493-19 (incorporated by reference, see §571.5), standard reference test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, without water delivery. Burnish stops are conducted on any surface. The parking brake test surface is clean, dry, smooth, Portland cement concrete.

(b) For vehicles with a GVWR greater than 10,000 pounds, stability and control during braking tests are conducted on a 500-foot-radius curved roadway with a wet level surface having a peak friction coefficient of 0.55 when measured on a straight or curved section of the curved roadway using an ASTM F2493-19 standard reference tire, in accordance with ASTM E1337-19 at a speed of 40 mph, with water delivery.

\* \* \* \* \*

4. Amend § 571.121 by revising paragraphs S5.3.1.1 introductory text, S5.3.6.1, S5.7.1, S6.1.7, Table I, Table II, and Table IIa to read as follows:

**§ 571.121 Standard No. 121; Air brake systems.**

\* \* \* \* \*

S5.3.1.1 Stop the vehicle from 60 mph on a surface with a peak friction coefficient of 1.02 with the vehicle loaded as follows:

\* \* \* \* \*

S5.3.6.1 Using a full-treadle brake application for the duration of the stop, stop the vehicle from 30 mph or 75 percent of the maximum drive-through speed, whichever is less, on a 500-foot radius curved roadway with a wet level surface having a peak friction coefficient of 0.55 when measured on a straight or curved section of the curved roadway using an ASTM F2493-19 (incorporated by reference, see §571.5) standard reference tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, with water delivery.

\* \* \* \* \*

S5.7.1 *Emergency brake system performance.* When stopped six times for each combination of weight and speed specified in S5.3.1.1, except for a loaded truck tractor with an unbraked control trailer, on a road surface having a PFC of 1.02, with a single failure in the service brake system of a part designed to contain compressed air or brake fluid (except failure of a common valve, manifold, brake fluid housing, or brake chamber housing), the vehicle shall stop at least once in not more than the distance specified in Column 5 of Table II, measured from the point at which movement of the service brake control begins, except that a truck-tractor tested at its unloaded vehicle weight plus up to 1500 pounds shall stop at least once in not more than the distance specified in Column 6 of Table II. The stop shall be made without any part of the vehicle leaving the roadway, and with unlimited wheel lockup permitted at any speed.

\* \* \* \* \*

S6.1.7 Unless otherwise specified, stopping tests are conducted on a 12-foot wide level, straight roadway having a peak friction coefficient of 1.02. For road tests in S5.3, the vehicle is aligned in the center of the roadway at the beginning of a stop. Peak friction coefficient is measured using an ASTM F2493-19 standard reference test tire (see ASTM F2493-19 (incorporated by reference, see §571.5)) in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, without water delivery for the surface with PFC of 1.02, and with water delivery for the surface with PFC of 0.55.

\* \* \* \* \*

Table I – Stopping Sequence

	Truck tractors	Single unit trucks and buses
Burnish (S6.1.8)	1	1
Stability and Control at GVWR (S5.3.6)	2	N/A
Stability and Control at LLVW (S5.3.6)	3	5
Manual Adjustment of Brakes	4	N/A
60 mph Service Brake Stops at GVWR (S5.3.1)	5	2
60 mph Emergency Service Brake Stops at GVWR (S5.7.1)	N/A	3

Parking Brake Test at GVWR (S5.6)	6	4
Manual Adjustment of Brakes	7	6
60 mph Service Brake Stops at LLVW (S5.3.1)	8	7
60 mph Emergency Service Brake Stops at LLVW (S5.7.1)	9	8
Parking Brake Test at LLVW (S5.6)	10	9
Final Inspection	11	10

Table II – Stopping Distance in Feet

Vehicle speed in miles per hour	Service Brake						Emergency Brake	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
30	70	78	65	78	84	61	170	186
35	96	106	89	106	114	84	225	250
40	125	138	114	138	149	108	288	325
45	158	175	144	175	189	136	358	409
50	195	216	176	216	233	166	435	504
55	236	261	212	261	281	199	520	608
60	280	310	250	310	335	235	613	720

**Note:**

- (1) Loaded and Unloaded Buses.
- (2) Loaded Single-Unit Trucks.
- (3) Loaded Tractors with Two Axles; or with Three Axles and a GVWR of 70,000 lbs. or less; or with Four or More Axles and a GVWR of 85,000 lbs. or less. Tested with an Unbraked Control Trailer.
- (4) Loaded Tractors with Three Axles and a GVWR greater than 70,000 lbs.; or with Four or More Axles and a GVWR greater than 85,000 lbs. Tested with an Unbraked Control Trailer.
- (5) Unloaded Single-Unit Trucks.
- (6) Unloaded Tractors (Bobtail).
- (7) All Vehicles except Tractors, Loaded and Unloaded.
- (8) Unloaded Tractors (Bobtail).

Table IIa – Stopping Distance in Feet: Optional Requirements for: (1) Three-Axle Tractors With a Front Axle That Has a GAWR of 14,600 Pounds or Less, and With Two Rear Drive Axles That Have a Combined GAWR of 45,000 Pounds or Less, Manufactured Before August 1, 2011; and (2) All Other Tractors Manufactured Before August 1, 2013

Vehicle speed in miles per hour	Service Brake				Emergency Brake	
	(1)	(2)	(3)	(4)	(5)	(6)
30	70	78	84	89	170	186
35	96	106	114	121	225	250
40	125	138	149	158	288	325
45	158	175	189	200	358	409
50	195	216	233	247	435	504
55	236	261	281	299	520	608
60	280	310	335	355	613	720

**Note:** (1) Loaded and unloaded buses; (2) Loaded single unit trucks; (3) Unloaded truck tractors and single unit trucks; (4) Loaded truck tractors tested with an unbraked control trailer; (5) All vehicles except truck tractors; (6) Unloaded truck tractors.



\* \* \* \* \*

5. Amend § 571.122 by revising paragraphs S6.1.1.1, S6.1.1.2, S6.1.1.3, and S6.9.7.1(a) to read as follows:

**§ 571.122 Standard No. 122; Motorcycle brake systems.**

\* \* \* \* \*

S6.1.1.1 *High friction surface.* A high friction surface is used for all dynamic brake tests excluding the ABS tests where a low-friction surface is specified. The high-friction surface test area is a clean, dry and level surface, with a gradient of  $\leq 1$  percent. The high-friction surface has a peak braking coefficient (PBC) of 1.02.

S6.1.1.2 *Low-friction surface.* A low-friction surface is used for ABS tests where a low-friction surface is specified. The low-friction surface test area is a clean and level surface, which may be wet or dry, with a gradient of  $\leq 1$  percent. The low-friction surface has a PBC of  $\leq 0.50$ .

S6.1.1.3 *Measurement of PBC.* The PBC is measured using the ASTM F2493-19 standard reference test tire, in accordance with ASTM E1337-19, at a speed of 64 km/h (both publications incorporated by reference; see §571.5).

\* \* \* \* \*

S6.9.7.1 \* \* \*

(a) *Test surfaces.* A low friction surface immediately followed by a high friction surface with a PBC  $\geq 0.90$ .

\* \* \* \* \*

6. Amend § 571.126 by revising paragraph S6.2.2 to read as follows:

**§ 571.126 Standard No. 126; Electronic stability control systems for light vehicles.**

\* \* \* \* \*

S6.2.2 The road test surface must produce a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493-19 (incorporated by reference, see §571.5) standard reference

test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5) at a speed of 64.4 km/h (40 mph), without water delivery.

\* \* \* \* \*

7. Amend § 571.135 by revising paragraphs S6.2.1, S7.4.3(f), S7.5.2(f), S7.6.2(f), S7.7.3(f), S7.8.2(f), S7.9.2(f), S7.10.3(e), and S7.11.3(f) to read as follows:

**§ 571.135 Standard No. 135; Light vehicle brake systems.**

\* \* \* \* \*

S6.2.1. Unless otherwise specified, the road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493-19 (incorporated by reference, see §571.5) standard reference test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 64.4 km/h (40 mph), without water delivery.

\* \* \* \* \*

S7.4.3. \* \* \*

(f) Test surface: PFC of at least 1.02.

\* \* \* \* \*

S7.5.2. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.6.2. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.7.3. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.8.2. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.9.2. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.10.3. \* \* \*

(e) Test surface: PFC of 1.02.

\* \* \* \* \*

S7.11.3. \* \* \*

(f) Test surface: PFC of 1.02.

\* \* \* \* \*

8. Amend § 571.136 by revising paragraph S6.2.2 to read as follows:

**§ 571.136 Standard No. 136; Electronic stability control systems for heavy vehicles.**

\* \* \* \* \*

S6.2.2 The road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493-19 standard reference test tire, in accordance with ASTM E1337-19, at a speed of 64.4 km/h (40 mph), without water delivery (both documents incorporated by reference, see §571.5).

\* \* \* \* \*

9. Amend § 571.139 by revising the definition of "Snow tire" in S3 to read as follows:

**§ 571.139 Standard No. 139; New pneumatic radial tires for light vehicles.**

\* \* \* \* \*

S3 \* \* \*

*Snow tire* means a tire that attains a traction index equal to or greater than 112, compared to the ASTM F2493-19 (incorporated by reference, see §571.5) Standard Reference Test Tire when using the snow traction test on the medium pack snow surface as described in ASTM F1805-20

(incorporated by reference, see §571.5), and that is marked with an Alpine Symbol specified in S5.5(i) on at least one sidewall.

\* \* \* \* \*

10. Amend § 571.500 by revising paragraph S6.2.1 to read as follows:

**§ 571.500 Standard No. 500; Low-speed vehicles.**

\* \* \* \* \*

S6.2.1. *Pavement friction.* Unless otherwise specified, the road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using a standard reference test tire that meets the specifications of ASTM F2493-19, in accordance with ASTM E1337-19, at a speed of 64.4 km/h (40.0 mph), without water delivery (both incorporated by reference; see §571.5).

\* \* \* \* \*

**PART 575—CONSUMER INFORMATION**

11. The authority citation for part 575 of title 49 continues to read as follows:

**Authority:** 49 U.S.C. 32302, 32304A, 30111, 30115, 30117, 30123, 30166, 30181, 30182, 30183, and 32908, Pub. L. 104-414, 114 Stat. 1800, Pub. L. 109-59, 119 Stat. 1144, Pub. L. 110-140, 121 Stat. 1492, 15 U.S.C. 1232(g); delegation of authority at 49 CFR 1.95

12. Amend § 575.3 by revising paragraph (c) to read as follows:

**§ 575.3 Matter incorporated by reference.**

\* \* \* \* \*

(c) *ASTM International (ASTM)*, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, 610-832-9500, <https://www.astm.org/>.

(1) ASTM E 501-08 (“ASTM E 501”), “Standard Specification for Standard Rib Tire for Pavement Skid-Resistance Tests” (June 2008), IBR approved for §§ 575.104 and 575.106.

(2) ASTM F2493-19 (“ASTM F2493”), “Standard Specification for P225/60R16 97S Radial Standard Reference Test Tire,” (approved Oct. 1, 2019), IBR approved for § 575.104.

\* \* \* \* \*

13. Amend § 575.104 by revising paragraphs (e)(2)(viii) introductory text, (e)(2)(viii)(A) through (E), and (e)(2)(ix)(A)(2), the note to paragraph (e)(2)(ix)(C), and paragraph (e)(2)(ix)(F) to read as follows:

**§ 575.104 Uniform tire quality grading standards.**

\* \* \* \* \*

(e) \* \* \*

(2) \* \* \*

(viii) Drive the convoy on the test roadway for 16 circuits (approximately 6,400 miles).

(A) After every circuit (approximately 400 miles), rotate each vehicle's tires by moving each front tire to the same side of the rear axle and each rear tire to the opposite side of the front axle.

Visually inspect each tire for treadwear anomalies.

(B) After every second circuit (approximately 800 miles), rotate the vehicles in the convoy by moving the last vehicle to the lead position. Do not rotate driver positions within the convoy. In four-car convoys, vehicle one shall become vehicle two, vehicle two shall become vehicle three, vehicle three shall become vehicle four, and vehicle four shall become vehicle one.

(C) After every second circuit (approximately 800 miles), if necessary, adjust wheel alignment to the midpoint of the vehicle manufacturer's specification, unless adjustment to the midpoint is not recommended by the manufacturer; in that case, adjust the alignment to the manufacturer's recommended setting. In all cases, the setting is within the tolerance specified by the manufacturer of the alignment machine.

(D) After every second circuit (approximately 800 miles), if determining the projected mileage by the 9-point method set forth in paragraph (e)(2)(ix)(A)(1) of this section, measure the average tread depth of each tire following the procedure set forth in paragraph (e)(2)(vi) of this section.

(E) After every fourth circuit (approximately 1,600 miles), move the complete set of four tires to the following vehicle. Move the tires on the last vehicle to the lead vehicle. In moving the tires, rotate them as set forth in paragraph (e)(2)(viii)(A) of this section.

\* \* \* \* \*

(ix) \* \* \*

(A) \* \* \*

(2) *Two-point arithmetical method.* (i) For each course monitoring and candidate tire in the convoy, using the average tread depth measurements obtained in accordance with paragraphs (e)(2)(vi) and (e)(2)(viii)(F) of this section and the corresponding mileages as data points, determine the slope (m) of the tire's wear in mils of tread depth per 1,000 miles by the following formula:

$$m = 1000 \frac{(Y1 - Y0)}{(X1 - X0)}$$

Where:

Y0 = average tread depth after break-in, mils.

Y1 = average tread depth after 16 circuits (approximately 6,400 miles), mils.

X0 = 0 miles (after break-in).

X1 = Total mileage of travel after 16 circuits (approximately 6,400 miles).

(ii) This slope (m) will be negative in value. The tire's wear rate is defined as the slope (m) expressed in mils per 1,000 miles.

\* \* \* \* \*

(C) \* \* \*

Note to paragraph (e)(2)(ix)(C): The base wear rate for the course monitoring tires (CMTs) will be obtained by the Government by running the tire specified in ASTM F2493 (incorporated by reference, see §575.3) course monitoring tires for 16 circuits over the San Angelo, Texas, UTQGS test route 4 times per year, then using the average wear rate from the last 4 quarterly CMT tests for the base course wear rate calculation. Each new base course wear rate will be published in Docket No. NHTSA-2001-9395. The course monitoring tires used in a test convoy must be no more than one-year-old at the commencement of the test and must be used within four months after removal from storage.

\* \* \* \* \*

(F) Compute the grade (P) of the of the NHTSA nominal treadwear value for each candidate tire by using the following formula:

$$P = \frac{\textit{Projected mileage} \times \textit{base course wear rate}_n}{304}$$

Where base course wear rate<sub>n</sub> = new base course wear rate, i.e., average treadwear of the last 4 quarterly course monitoring tire tests conducted by NHTSA.

Round off the percentage to the nearest lower 20-point increment.

\* \* \* \* \*

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Steven S. Cliff,  
Acting Administrator.

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